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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,806

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Olivier J.M. Hus

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EXAMINER

SARWAR, BABAR

ART UNIT

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2617

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,806	<b>Applicant(s)</b> HUS ET AL.	
	<b>Examiner</b> BABAR SARWAR	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to **claims 1-20** have been considered but are moot in view of the new ground(s) of rejection.

### *Status of Claims*

2. **Claims 1, 15, and 19** have been amended.
3. **Claims 1-20** are currently pending.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US Pub. No. 2002/0003798 A1) in view of Varma (US Pat. 7,88,919 B2).

Regarding **claims 1, 15, and 19**, Sato teaches a method of operating a packet data multicast communication system comprising a first station and a plurality of second stations (See Sato e.g. a base station transmitting multicast information to a plurality of wireless terminals Figs. 1, 4, ¶ [0014]), the first and second stations having transceiving equipment for communication between the first and second stations (See Sato e.g. communication between the a base station and the wireless terminals Figs. 1, 4, ¶ [0015]), the method comprises the first station transmitting a data packet and at least one of the plurality of the second stations receiving the data packet (See Sato e.g. Figs.

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1, 4, ¶ [0014], ¶ [0015]), characterized by the at least one of the plurality of the second stations measuring the quality of reception of the received data packet (See Sato e.g. measuring reception quality at the wireless terminals Figs. 1, 4, ¶ [0026], ¶ [0034]), and determining into which one of at least three predetermined quality ranges the measured quality falls, wherein the first station adopts a respective subsequent transmitter behavior in response to each of the at least three predetermined quality ranges (See Sato e.g. the base station with a plurality of transmission rates or schemes based on measurements Fig. 10, ¶ [0102], ¶ [0103]).

Sato teaches that the wireless terminals measure the reception quality of signals received from the base station (See Sato e.g. measuring reception quality at the wireless terminals Figs. 7-9, ¶ [0102]). Sato further teaches receiving multicast information by using different transmission conditions (See Sato e.g. spreading codes, modulation schemes, and identification of time slots etc. Figs. 7-9, ¶ [0102], ¶ [0103]). However, Sato is silent that the subsequent transmitter behavior corresponding to at least two non-contiguous ones of the quality ranges is identical wherein the subsequent transmitter behavior includes adjusting at least one transmitter parameter of the first station such that the at least one transmitter parameter corresponding to the at least two non-contiguous ones of the quality ranges is identical. In analogous field of endeavor, Varma teaches the subsequent transmitter behavior corresponding to at least two non-contiguous ones of the quality ranges is identical wherein the subsequent transmitter behavior includes adjusting at least one transmitter parameter of the first station such that the at least one transmitter parameter corresponding to the at least two non-

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contiguous ones of the quality ranges is identical (See Varma e.g. non-contiguous states (lines) 21, 23 etc. with identical parameters such as High symbol rate (HSR), Low symbol rate (LSR) , and Forward error correction (FEC), assigned indexes corresponding to a particular set of wireless link parameters of Figs. 3, 6, Page 5 Table regarding Line and wireless link parameters, Col. 4:34-67, Col. 5:1-30, Col. 6:55-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a system of dynamically adapting a set of wireless link parameters that provides a better selection of throughput as well as adapting more efficiently to changes in communication conditions as suggested (Col. 1:46-51).

Regarding **claim 2**, Sato and Varma teach everything as discussed above in the rejected claim 1. Further, Sato teaches that the method characterized by the second station transmitting indicia representative of the quality ranges other than said at least two non-contiguous quality ranges (See Sato e.g. spreading codes, modulation schemes, and identification of time slots etc. Figs. 7-9, ¶ [0102], ¶ [0103]).

Regarding **claim 3**, Sato and Varma teach everything as discussed above in the rejected claim 2. Further, Sato teaches that the method characterized by the second station transmitting the indicia representative of the quality ranges in respect of each of the at least two non-contiguous quality ranges (See Sato e.g. spreading codes, modulation schemes, and identification of time slots etc. Figs. 7-9, ¶ [0072], ¶ [002], and ¶ [0103]).

Regarding **claim 4**, Sato and Varma teach everything as discussed above in the rejected claim 1. Further, Sato teaches that the method characterized in that the at least

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two non-contiguous quality ranges are the best and the worst quality ranges (See Sato e.g. a plurality of transmission rates T1-T5 of Figs. 10, 15).

Regarding **claims 5, 16, 20**, Sato and Varma teach everything as discussed above in the rejected claims 1, 15, 19. Further, Sato teaches that the method wherein the measuring of the quality of reception of the received data packet is characterized by comparison of a measure of a predetermined quality metric of a received signal with at least three quality ranges (See Sato e.g. a plurality of transmission rates T1-T5, modulation schemes of Figs. 10, 15).

Regarding **claim 6**, Sato and Varma teach everything as discussed above in the rejected claim 5. Further, Sato teaches that the method characterized in that the quality ranges are defined by threshold values applied by respective second stations (See Sato e.g. reception quality predetermined levels, ¶ [0073]).

Regarding **claim 7**, Sato and Varma teach everything as discussed above in the rejected claim 5. Further, Sato teaches that the method characterized in that the quality ranges are defined by threshold values signaled to the second stations by the first station (See Sato e.g. reception quality predetermined levels for the wireless terminals, ¶ [0073]).

Regarding **claim 8**, Sato and Varma teach everything as discussed above in the rejected claim 5. Further, Sato teaches that the method characterized in that the predetermined quality metric comprises at least one of:  $E_b/N_0$  (energy per bit/noise density); the number of data packets received successfully in a predetermined time window; the proportion of data packets previously received correctly out of a group of

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predetermined number of packets; and the received SIR (Signal to Interference Ratio) or SNR (Signal to Noise Ratio) of another received signal (See Sato e.g. reception level, an interference level, and an error rates etc., ¶ [0059]).

Regarding **claim 9**, Sato and Varma teach everything as discussed above in the rejected claim 8. Further, Sato teaches that the method characterized in that the quality of reception of the received data packet is determined during a predetermined duration (See Sato e.g. a predetermined time period for reception of multicast information, ¶ [0068]).

Regarding **claims 10, 17**, Sato and Varma teach everything as discussed above in the rejected claims 1, 15. Further, Sato teaches that the method characterized in that the first station adjusts one or more transmission parameters to ensure that at least a predetermined percentage of secondary stations receive a data packet data service satisfactorily (See Sato e.g. selection of spreading codes, modulation schemes, and identification of time slots etc., ¶ [0077]).

Regarding **claims 11, 18**, Sato and Varma teach everything as discussed above in the rejected claims 10, 17. Further, Sato teaches that the method characterized in that the transmission parameters comprise one or more of: number of retransmissions; transmit power; spreading factor; code rate; and modulation scheme (See Sato e.g. selection of spreading codes, modulation schemes, and identification of time slots transmission rates etc., ¶ [0077]).

Regarding **claim 12**, Sato and Varma teach everything as discussed above in the rejected claim 2. Further, Sato teaches that the method characterized in that different of

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the indicia are distinguished by transmission at different times (See Sato e.g. selection of spreading codes, modulation schemes, and identification of time slots transmission rates etc., ¶ [0102]).

Regarding **claim 13**, Sato and Varma teach everything as discussed above in the rejected claim 2. Further, Sato teaches that the method characterized in that different of the indicia are distinguished by different code words (See Sato e.g. selection of spreading codes, modulation schemes, and identification of time slots transmission rates etc., ¶ [0077]).

Regarding **claim 13**, Sato and Varma teach everything as discussed above in the rejected claim 2. Further, Sato teaches that the method characterized in that different of the indicia are distinguished by different frequency channels (See Sato e.g. selection of spreading codes, modulation schemes, and identification of time slots transmission rates etc., ¶ [0077]).

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the



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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BABAR SARWAR whose telephone number is (571)270-5584. The examiner can normally be reached on MONDAY TO FRIDAY 09:00 A.M -05:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on (571)272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 2617

/KAMRAN AFSHAR/

Primary Examiner, Art Unit 2617